# Confidence Intervals and Hypothesis Tests: Two Samples

## 9.10 Using the f-table to Find Critical Values

1. Use the appropriate f-table and the given data to find the critical value that would be used to test the claim:

$Claim: \sigma_1^2 > \sigma_2^2$

$\alpha = 0.10$

$n_1 = 31, s_1 = 57.89$

$n_2 = 30, s_2 = 51.20$

2. Use the appropriate f-table and the given data to find the critical value that would be used to test the claim:

$Claim: \sigma_1^2 < \sigma_2^2$

$\alpha = 0.01$

$n_1 = 31, s_1 = 15.1$

$n_2 = 41, s_2 = 17.3$

3. Use the appropriate f-table and the given data to find the critical value that would be used to test the claim:

$Claim: \sigma_1^2 \neq \sigma_2^2$

$\alpha = 0.05$

$n_1 = 61, s_1 = 1.03$

$n_2 = 41, s_2 = 1.11$

Answers:

1. $f_{30,29,0.10} = 1.62$

2. $f_{40,30,0.01} = 2.30$

3. $f_{40,60,0.025} = 1.74$